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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS

Assignee's Docket No.: 8798)
Group Art Unit: 2623)
Serial No.: 09/666,655)
Examiner: Jon Carlton Chang)
Filing Date: September 20, 2000)
Title: Creation, Transmission)
And Retrieval of)
Information)

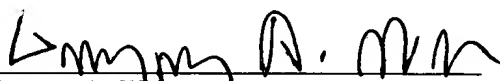
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APPEAL BRIEF

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Gregory A. Welte

1. REAL PARTY IN INTEREST

NCR Corporation.

2. RELATED APPEALS AND INTERFERENCES

None.

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09/666,655
Art Unit 2623
8798

3. STATUS OF CLAIMS

Claims 1 - 41 are pending, rejected, and appealed, except claims 23, 24, 27, 40, and 41 which are not appealed. These latter claims have not been cancelled, because appealed claims depend from them.

4. STATUS OF AMENDMENTS

An Amendment-After-Final is submitted, correcting a typographical error in claim 17. This Amendment removes issues from appeal, in removing a potential 112-rejection.

5. SUMMARY OF INVENTION

The Specification, page 6, line 13 et seq., refers to a command device 10 in Figure 1, which resembles a pen. The device 10 includes a head end 14, which includes an optical scanner.

The scanner is dragged across a printed URL 26 in Figure 1, which scans the URL, to develop a scanned image, or bitmap, of the URL. "URL" is an acronym for "Uniform Resource Locator," and refers, for example, to an address on the Internet of a web site.

The Specification, page 7, line 12 et seq., states that OCR, Optical Character Recognition, software in the device 10 processes the scanned URL, to determine the alphanumeric characters in the URL.

The Specification, page 7, line 22 et seq., states that the

09/666,655
Art Unit 2623
8798

device then examines the URL to determine the nature of the scanned URL. Based on that determination, a "launch code" is developed. Two examples will illustrate.

As one example, if the nature of the URL is found to be a web page address, then the "launch code" developed is that of a web browser. Launching the web browser allows one to reach the web page indicated by the scanned URL.

As a second example, if the nature of the URL is found to be an e-mail address, the launch code developed is that of e-mail software. Launching that software allows one to send a message to the e-mail address.

The scanned URL and the launch code are then selectively downloaded to a nearby computer, to, for example, connect to the web page, or send the e-mail message.

6. ISSUES

Whether claims 1 - 3, 16, 18 - 22, 25, 26, 28, 29, 32, and 35 - 39 are anticipated under 35 USC 102(e), based on Browning.

Whether claim 17 is obvious under 35 USC 103, based on Browning.

Whether claims 4, 5, 30, and 31 are obvious under 35 USC 103, based on Browning and Tanaka.

Whether claims 6, 8 - 15, 33, and 34 are obvious under 35 USC 103, based on Browning and Kasabach.

09/666,655
Art Unit 2623
8798

Whether claim 7 is obvious under 35 USC 103, based on Browning, Kasabach, and Shriver.

7. GROUPING OF CLAIMS

Five groups of appealed claims are present, namely:

GROUP 1: Claims 1 - 3, 16, 18 - 22, 25, 26, 28, 29, 32, and 35 - 39.

GROUP 2: Claim 17.

GROUP 3: Claims 4, 5, 30, and 31.

GROUP 4: Claims 6, 8 - 15, 33, and 34.

GROUP 5: Claim 7.

No claims in any group stand or fall together, with the exception of claims 16, 18, 35, 36, 38, and 39, which stand or fall with their parents.

8. ARGUMENT

SUMMARY OF ARGUMENT

This Summary will only consider a few claims, and one general point.

Claim 3

Claim 3 was rejected under section 102, based on Browning. A summary of Browning is given below, on page 8, in connection with claim 2.

09/666,655
Art Unit 2623
8798

Claim 3

Claim 3 recites:

3. A device according to claim 2,
further comprising

means for retrieving an application launch
code suitable to launch an application on the
terminal appropriate to the nature of the
addressed resource.

The language of claim 3, and its parent claims 1 and 2,
require that the "means" of claim 3 be included in the "hand-held"
"device" of claims 2 and 1. That is not found in Browning. Any
corresponding "means" in Browning is found elsewhere, such as in
a personal computer.

Claim 4 and 5

Claim 4 was rejected as obvious, based on Browning and Tanaka.

Claim 4 recites:

4. A device according to claim 3,
further including

means for appending the application **launch
code** to the address information before upload
to the terminal.

The Final Action purports to find the "launch code" in an
instruction in Tanaka. However, Tanaka discusses computer modems,
and that instruction is one of the instructions of a modem. But

09/666,655
Art Unit 2623
8798

under claim 4 and its parents, the "launch code" launches a computer program. That does not occur in Tanaka when an instruction is issued to a modem.

Further, Tanaka is non-analogous art. Nobody would look to Tanaka's modems for assistance in designing a scanner of the type in claim 4, or in Browning.

Further still, the "address" of claim 4 does not correspond to the "addresses" in Tanaka. The address of claim 4 is an address of a "resource," such as a web site on the Internet. But the address of Tanaka is the address of a modem. A modem is not a "resource."

Still further, parent claim 1 states that the "address" is obtained by scanning. There is no scanning in Tanaka to obtain his address.

Furthermore, claim 4 states that the "appending" of the "address" to the "launch code" is done "before upload to the terminal." There is no "upload to the terminal" in Tanaka. There is transfer of modem commands to a specific, addressed modem. But that addressed modem is not a "terminal."

In addition, no teaching has been given in favor of combining the references. The rationale given is that

. . . the particular program to be launched is associated with the address information, and appending would allow more efficient launching of the application.

09/666,655
Art Unit 2623
8798

(Final Office Action, page 14, last paragraph.)

However, several problems, outlined later in this Brief, exist in this rationale. Perhaps the worst is that the rationale is based on a **false statement**.

In Tanaka, there is no "program to be launched" which is "associated with the address information." Instead, a **modem command** is associated with the address information.

And, as stated above, the "address information" in Tanaka does not correspond to claim 4. In Tanaka, the address is the address of a modem, not a "resource" as in claim 4.

In addition, the language of claim 4 indicates that the "means" of claim 4 is part of the "hand-held" "device." The modems in Tanaka are not "hand-held devices."

This applies to dependent claim 5 and claims 30 and 31.

The subject matter of claims 5 and 31 has not been shown in the applied references.

Claim 1

Claim 1 was rejected under section 102, based on Browning.

Claim 1 recites, in part:

command output means for uploading address information from the device to the terminal and **causing the terminal to connect to the**

09/666,655
Art Unit 2623
8798

addressed resource.

Under the language of claim 1, the "command output means" is part of a "hand-held" "device."

Browning may show a hand-held device. However, that device does not cause a terminal to connect to an addressed resource. That device **only** loads Internet addresses to Browning's terminal.

That loading does not "cause" a connection to the Internet, for at least two reasons, which result from the fact that Browning's system operates either in (1) user-controlled mode or (2) automatic mode.

In user-controlled mode, no connection is made until the user issues a command to the terminal. Browning's hand-held device is not involved in that command.

In automatic mode, Internet addresses are transferred from the hand-held device to the terminal. Then the user instructs the terminal to sort the addresses, according to some criterion. After sorting, the terminal connects to the **first address** on the sorted list.

But the hand-held device was not involved in the sorting. Thus, in automatic mode, the hand-held device does not "cause" a connection to the addresses.

09/666,655
Art Unit 2623
8798

re: Obviousness Rejections

For the following dependent claims, the Final Office Action first rejects the parent claim. Then, for each of the following dependent claims, the Action asserts that one of the references shows the subject matter of the dependent claim. But the Action gives no teaching for combining that subject matter with the other reference.

The claims in question are: 5, 8, 9, 10, 11, 12, 13, 14, 15, 30, 31, 33, and 34.

A teaching is required. The mere presence, in references combined to reject a parent claim, of subject matter supposedly corresponding to a dependent claim, is insufficient to reject the dependent claim.

END SUMMARY

09/666,655
Art Unit 2623
8798

ARGUMENT:

**RESPONSE TO 102 - REJECTION OF CLAIMS
1 - 3, 16, 18 - 22, 25 - 29, 32, AND 35 - 39**

The claims identified above were rejected on grounds of anticipation, based on Browning.

Claim 2

SUMMARY

Claim 2 and its parent claim state that the "recognition means" of claim 2 is **contained in the** "hand-held" "device." That is not shown in Browning.

END SUMMARY

Browning Reference

Browning states that his invention contains "two main components," namely,

- (1) a hand-held scanner and
- (2) a "software communications agent" which runs on a "communications device" such as a personal computer, PC.

(Column 2, lines 12 - 20; column 3, lines 26 - 28.)

A user employs the hand-held scanner to scan printed text, such as an Internet address, called a URL, Uniform Resource Locator. The hand-held scanner then performs character recognition

09/666,655
Art Unit 2623
8798

on the scanned text. (Column 2, line 46 et seq.)

After the character recognition is done, the result is displayed on a display, so that the user can determine whether the character recognition correctly interpreted the printed text. If the number of characters to be displayed is larger than the capacity of this display, the characters are scrolled. (Column 2, lines 57 -65.)

If the scan is correct, the character string is stored in the hand-held device. If not, the character string is deleted, and a re-scan can occur. (Column 2, line 65 - column 3, line 6.)

Browning states that, in one embodiment, the scanner can be designed to recognize only (1) URLs and (2) e-mail addresses. In such a case, the scanner can be designed to recognize only the limited characters used in those addresses. (Column 2, lines 54 - 58.) However, the undersigned attorney cannot find a statement in Browning indicating that his hand-held scanner actually **classifies** the scanned address as either a URL or e-mail address.

The hand-held scanner can store multiple scanned addresses. (Column 4, lines 3, 4.)

The hand-held scanner contains a switch 24 in Figure 3 which allows the user to order the scanner to download the scanned addresses to a PC. (Column 3, lines 28 - 31.) A "software communications agent," running on the PC, receives the scanned addresses. That "agent" displays the scanned addresses, and

09/666,655
Art Unit 2623
8798

options are available for sorting the scanned addresses, as by date, topic, etc. (Column 3, lines 31, 33 - 36; column 4, lines 8 - 13.)

The "agent" causes the PC to connect to one of scanned addresses, as by connecting to the Internet. (Column 4, lines 15 - 18.)

The "agent" (which runs on the PC) has two modes of operation: (1) automatic and (2) user-controlled. (Column 4, lines 18 - 20.)

-- In user-controlled mode, no connection is made to the scanned address, until the user issues a signal to the "agent," which, again, runs on the PC. (Column 4, lines 23 - 26.)

-- In automatic mode, the "agent" automatically connects to the first address in the sorted list. (Column 4, lines 32 - 34.)

Significant Features of Browning Reference

Browning's hand-held scanner does not issue any **commands** ordering the PC to connect to the Internet. It only downloads **data** to the PC, namely, the scanned addresses.

Browning's hand-held scanner does not "cause" the PC to connect to an Internet address.

-- One reason is that, if the "agent" running on the PC is in "user-controlled mode," as

09/666,655
Art Unit 2623
8798

explained above, the "agent" awaits a signal from the user before connecting. Plainly, that signal is issued to the PC, as by a mouse or keyboard. The hand-held scanner is not involved.

-- Another reason is that, if the "agent" is in "automatic mode," as explained above, an Internet connection is made to the **first address** on the "sorted list." But the sorting is done by the agent. The type of sorting is chosen by the user, and the user clearly makes the choice by ordinary input to the PC, as by using a mouse or keyboard. The hand-held scanner is not involved.

Thus, Browning's hand-held scanner does not do any of the following: (1) determine the type of sorting, (2) thereby determine which address will stand at the top of the sorted list, nor (3) "cause" a connection to the scanned address.

Application to Claim 2

Claim 2 depends from claim 1, and both are here set forth:

09/666,655
Art Unit 2623
8798

1. A hand-held control device for controlling a terminal connectable by a communications network to an addressed resource, the device comprising:

address input means for scanning a text address of the resource;

and

command output means for uploading address information from the device to the terminal and causing the terminal to connect to the addressed resource.

2. A device according to claim 1, further comprising

recognition means for recognizing the nature of the addressed resource from the format of the scanned text address.

The subject matter of claim 2 has not been shown in the applied references. The Final Office Action, as well as the first Office Action, asserted that claim 2 was "inherent" in Browning.

Appellant's Previous Request

In Appellant's response to the first Office Action, Appellant pointed to MPEP § 2112, which states:

EXAMINER MUST PROVIDE RATIONALE OR EVIDENCE
TENDING TO SHOW INHERENCY.

In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent

09/666,655
Art Unit 2623
8798

characteristic necessarily flows from the teaching of the applied prior art.

Appellant requested that the "basis in fact and/or technical reasoning" be provided, as required by this MPEP section.

Appellant also stated that one reason for this request is that Browning's software "agent" retrieves e-mail messages and web pages. (Column 3, lines 36 - 44.) Thus, the "agent" makes the decision as to the identity of the scanned text (ie, URL or e-mail address, for example), if any such decision is made.

However, that "agent" runs on Browning's stationary terminal, or PC, not on the hand-held device. (Column 3, bottom, column 4, top.) But claims 1 and 2 state that the "recognition means" is contained in the "hand-held control device."

Thus, it appears that if anything performing the function of the "means" of claim 2 is found in Browning (and that has not been shown, only asserted to be "inherent"), that thing appears to run on the stationary terminal, or computer. Claim 2 does not recite that.

PTO'S RESPONSE TO APPELLANT'S REQUEST

In response to Appellant's request, the Final Office Action, paragraph bridging pages 5 and 6, asserts that the basis for inherency has been given in the first (ie, the previous) Office Action on page 3, in the section discussing claim 2.

09/666,655
Art Unit 2623
8798

However, that section of the Office Action only argues that Browning shows **classification of the text** (eg, classification as either a URL or e-mail address) which was scanned by Browning. As explained above, it appears that any such classification is done by Browning's software "agent."

That "agent" is not contained in the Browning's hand-held device. It is contained in Browning's stationary terminal.

Further, the justification of that conclusion (that Browning performs the classification) is suspect. That section of the prior Office Action asserts that, since Browning's system can successfully connect to either an e-mail address or URL, "Therefore the device can recognize the nature of the addressed resource (e.g., web or e-mail server.)" (Prior Office Action, page 3, middle of third full paragraph.)

However, as explained above, even if that assertion be true, it does not show the "recognition" being done **in Browning's hand-held device**.

In addition, this assertion is pure speculation, and is not supported by the Browning passages which it relies on, namely, column 4, lines 31 - 37 and 44 - 50.)

SPECULATION

As to speculation, the assertion presumes operation of the Internet which has not been proven. It presumes that transmitting

09/666,655
Art Unit 2623
8798

either

(1) an e-mail address

or

(2) a URL

to one's Internet Service Provider (ISP) must be accompanied by a declaration stating "This is a URL," or "This is an e-mail address."

Appellant submits that the Office Action must demonstrate that this declaration is required. Further, such a requirement seems dubious, since, if the declaration is needed, the ISP can just as easily distinguish the URL from the e-mail address.

LACK OF SUPPORT

The passages relied on in Browning do not support the PTO's conclusion. The former passage, column 4, lines 31 - 37, merely described "automatic mode," wherein the first address on the "sorted list" is connected to. That requires no discrimination as to whether that address is a URL or an e-mail address.

The latter passage in Browning, column 4, lines 44 - 50, merely states that the type of information downloaded from the address connected to depends on the type of address. That is, supposedly, a web site will be downloaded from a web page, and e-mail messages will be downloaded from an e-mail server. But that again requires no discrimination as to whether the address

09/666,655
Art Unit 2623
8798

contacted is a URL or an e-mail address.

Additional Point

It appears that Browning contains a fundamental error in understanding of how the Internet works. Since the PTO relies on that error in reaching its conclusions, those conclusions are suspect.

Browning states that the scanned address can be either a URL or an e-mail address. (Column 2, line 55.) He then states that his system can **connect to a URL or to an e-mail address**. That is, Browning states that hys system **CONNECTS TO AN E-MAIL ADDRESS**. That is the error.

According to Browning, connecting to an e-mail address would be done to retrieve an e-mail message which is addressed to Browning's user.

Appellant submits that Browning's assertion that one connects "to an e-mail address," to fetch e-mail messages, is factually incorrect. To download your e-mail messages, you **do not** connect to an e-mail address. Instead, you log into a web site, provide verification, and download the messages.

For example, the undersigned attorney can do this, and has done it, at the web site labeled www.mintel.net.

Therefore, Appellant submits that Browning is incorrect in his statement that e-mail addresses are used like URLs in fetching e-

09/666,655
Art Unit 2623
8798

mail. That is incorrect. To fetch e-mail messages, you log into a web site, using the URL of the web site.

Thus, there is no basis for the PTO's claim that Browning must determine whether the scanned address is (1) a URL or (2) an e-mail address, in order to respectively connect to the URL or to the e-mail server. You cannot connect to the e-mail server, using an e-mail address.

The e-mail server is reached through a URL, just as the URL is.

Conclusion

Therefore, claim 2 states that the "recognition means" is part of the "hand-held" "device." Browning does not show that.

Browning does not actually state that he determines whether, for example, the scanned address is (1) a URL or (2) an e-mail address.

There is no need for Browning to make that determination, because his stated way of using an e-mail address (column 4, lines 44 - 50) does not exist. Appellant offers to submit an affidavit on this point, if the Board requests, but the affidavit is seen as unnecessary, because

- (1) the burden is on the Examiner to support its reasoning that, since Browning connects to an e-mail address he must distinguish whether

09/666,655
Art Unit 2623
8798

the scanned image is a URL or e-mail address,
and

(2) the non-existence of Browning's usage
seems self-evident.

Claim 3

Claim 3 recites:

3. A device according to claim 2,
further comprising

means for retrieving an application launch
code suitable to launch an application on the
terminal appropriate to the nature of the
addressed resource.

Browning, column 4, lines 60 - 64, is cited by the PTO to show
claim 3.¹ That passage in Browning, together with its context,
states that:

-- After a web page has been downloaded from
a web site, Browning determines whether
"playback mode" is in force.

-- If so, a check is made whether the
Internet browser is running.

-- If not, the browser is launched.

Several problems exist in reliance on this passage in

¹ In Appellant's previous response, Appellant mistakenly
addressed lines 60 - 64 in column 3, not column 4.

09/666,655
Art Unit 2623
8798

Browning.

Problem 1

The operations of this passage, even if present in Browning, do not occur **in Browning's hand-held device**. His "software agent" is involved in the operations, and that "agent" runs on Browning's stationary computer. Browning explicitly states, at column 3, last line, - column 4, line 1, that the "software communications agent" 34, in his Figure 4, runs "on the computer."

Problem 2

Claim 3 states, in brief, that the "application" which is launched is "appropriate to the nature of the addressed resource."

-- For example, if the "addressed resource" is an e-mail message, an e-mail program is launched.

-- As another example, if the "addressed resource" is a web site, a web browser is launched.

Parent claim 2 states that the "nature" of the "addressed resource" is determined, and claim 3 states that an "application" is launched, which is "appropriate" **to that "nature."**

That **combined operation** is not shown in Browning.

09/666,655
Art Unit 2623
8798

It may be true that Browning's "browser program 44" (column 4, line 60) is "appropriate" to his "retrieved information." However, that does not show the **combined** operation of claim 2 and 3, namely, determining the "nature" and then launching an "application" "appropriate" to that nature.

Further, Browning indicates that, if the browser is already running, then no launch is done. In that case, the launch of claim 3 is absent.

Claims 16 and 18

Claims 16 and 18 stand or fall with their parents.

Claim 19

Claim 19 recites:

19. A device according to claim 18,
further comprising

(i) means for displaying all of the stored
resource addresses, and

(ii) means for selecting an appropriate one
of the stored and displayed resource
addresses.

Appellant points out that claim 19 ultimately depends from claim 1. Thus, the two "means" of claim 19 must be contained in the "hand-held" "device."

This conclusion is further supported by the fact that the

09/666,655
Art Unit 2623
8798

Specification does not discuss implementing those two "means" any place other than in the hand-held device.

re: Claim 19(i)

The Final Office Action, page 11, first paragraph, asserts that claim 19(i) is found in Browning at column 2, lines 58 - 60. However, that passage only refers to (1) viewing text which was just scanned, and (2) scrolling through that text, if it will not fit into the display all at once.

The text in question is a **single** address.

Claim 19(i) recites displaying "**all** of the **stored** . . . addresses." Thus, the passage in Browning on which the PTO relies does not show claim 19(i).

It could be argued that, since all addresses ultimately entered into Browning's device will be displayed prior to entry, that Browning therefore displays "all addresses" by showing them as described in the passage in question, namely, column 2, lines 58 - 60.

However, that is not so. Claim 19(i) recites displaying all "stored" "addresses." At the time when Browning displays the addresses, they are not stored. They are stored afterward. (Column 2, bottom.) And only if the user calls for storage: incorrect addresses are discarded.

09/666,655
Art Unit 2623
8798

Claim 19(ii)

The Final Office Action asserts that Browning, column 4, lines 29, 30, show claim 19(ii). However, that is not so. The operations described in that passage occur in Browning's stationary computer. He states that his "software" "agent" awaits "selection of one of the addresses."

But he states elsewhere that this "agent" runs "on the computer." (Column 3, bottom, - column 4, top.)

Conclusion

Therefore, neither claim 19(i) nor (ii) have been shown in Browning.

Claim 25

Claim 25 recites:

25. A system comprising:

a hand-held control device for controlling a terminal connectable by a communications network to an addressed resource, the device including

(i) address input means for scanning a text address of the resource, and

(ii) command output means for uploading address information from the device to the terminal and **causing the terminal to connect to the addressed resource;** and

09/666,655
Art Unit 2623
8798

a terminal for downloading address
information from the device.

The **highlighted** recitation is missing from Browning.

Appellant asserts that nothing in the hand-held device of Browning "causes" "the terminal to connect to the addressed resource." This was set forth in the explanation of the Browning reference, and is repeated here.

Browning's hand-held scanner does not "cause" the PC to connect to an Internet address.

-- One reason is that, if the "agent" running on the PC is in "user-controlled mode," as explained above, the "agent" awaits a signal from the user before connecting. Plainly, that signal is issued to the PC, as by a mouse or keyboard. The hand-held scanner is not involved.

-- Another reason is that, if the "agent" is in "automatic mode," as explained above, an Internet connection is made to the **first address** on the "sorted list." But the sorting is done by the agent. The type of sorting is chosen by the user, and the user clearly makes the choice by ordinary input to the PC, as by using a mouse or keyboard.

09/666,655
Art Unit 2623
8798

Thus, Browning's hand-held scanner does not do any of the following: (1) determine the type of sorting, (2) thereby determine which address will stand at the top of the sorted list, and (3) "cause" a connection to the scanned address.

From another perspective, Browning's hand-held device only transmits addresses to his terminal, which is a computer. What happens next depends on the options selected by the user.

If the user selected "user-controlled" mode, nothing happens until the user provides input calling for a connection to the "addressed resource," (eg, a web site). (Column 4, lines 15 - 32.)

However, that input is not obtained from Browning's hand-held device.

-- Browning states that the hand-held device only performs scanning of the addresses, and storage of them.

-- His Figures 1A, 1B, and 3, showing the hand-held device, show no elements, controls, or buttons by which the user selects a "mode."

-- His block 54 in Figure 5 refers to the input in question. But that block is within a flow chart illustrating a program which runs

09/666,655
Art Unit 2623
8798

on his stationary computer. Plainly, that block is awaiting input from a mouse, keyboard, or the like. But not from the hand-held device.

Similarly, if the stationary computer is in "automatic" mode, the computer automatically connects to the first address on the scanned list. But the hand-held device did not "cause" the connection. The selection of "automatic" mode actually did. And that selection is done at the stationary computer, not at the hand-held device.

Stated another way, if the loading of the address from the hand-held device "causes" the connection, then why does the connection not occur when the system is in "user-controlled" mode ? The answer is that Browning's hand-held device does not actually control whether the connection is made.

His stationary computer controls how the computer responds to the loaded addresses, and thus determines whether a connection is made.

Claim 26

Claim 26 recites:

09/666,655
Art Unit 2623
8798

26. A system according to claim 25,
wherein the terminal includes

means for recognizing, verifying and acting
upon command data.

By virtue of 35 USC § 112, discussed in greater detail herein
in connection with claim 1, the "means" of claim 26 must correspond
to that recited in Appellant's Specification.

That "means" receives "command data" from the "hand-held"
"device."

Browning's hand-held device does not develop "commands."
Thus, his "terminal" does not, and cannot, receive "commands" from
the hand-held device.

Claims 27 - 29, 32, and 35 - 39

Claim 27

The rejection of claim 27 is not contested.

Claim 28

Claim 28 recites:

28. A method according to claim 27,
further comprising

recognizing the nature of the addressed
resource from the format of the scanned text
address.

The PTO relied on "inherency" to reject claim 28. Appellant

09/666,655
Art Unit 2623
8798

requested support. In response, the Final Action (page 6) relies on the reasons given in rejection of claim 2, in rejection of claim 28.

The discussion above, regarding claim 2, showed that

- (1) the PTO has not shown why Browning needs to recognize any "nature," and
- (2) Browning's assumption (that one fetches e-mail by connecting to an e-mail address) is incorrect.

Thus, the PTO has not provided the required "basis in fact and/or technical reasoning" required by MPEP § 2112, which states:

EXAMINER MUST PROVIDE RATIONALE OR EVIDENCE
TENDING TO SHOW INHERENCY.

In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teaching of the applied prior art.

Claims 29 and 37

In response to the Final Action, page 6, paragraph beginning "On page 10 . . .", Appellant points out that, as to claim 29, Browning may "retrieve" a launch code, but that retrieval is done **internally within his computer**. The launch code is not received from the hand-held device. A similar comment applies to claim 37,

Further, it is not necessary, as the Final Action asserts,

09/666,655
Art Unit 2623
8798

that this code originate in Browning's hand-held scanner. It can originate in Browning's PC, as it does.

Claim 32

Claim 32 recites:

32. A method according to claim 27,
further comprising

controlling the terminal by a hand-held device
that scans the resource address and uploads
resource address information to the terminal.

In Browning, the hand-held scanner does not "control" the PC.
That scanner only loads data to the PC.

Claims 35, 36, 38, and 39

These claims stand or fall with their parents.

Claim 1

Claim 1 recites:

1. A hand-held control device for
controlling a terminal connectable by a
communications network to an addressed
resource, the device comprising:

address input means for scanning a text
address of the resource;

and

command output means for uploading address

09/666,655
Art Unit 2623
8798

information from the device to the terminal
and **causing the terminal to connect to the
addressed resource.**

Claimed Causation Not Present in Browning

As explained above, in the explanation of the Browning reference, Browning's hand-held scanner does not "cause the terminal to connect to the addressed resource." Some of the reasons are here repeated:

Browning's hand-held scanner does not issue any **commands** ordering the PC to connect to the Internet. It only downloads **data** to the PC, namely, the scanned addresses.

Browning's hand-held scanner does not "cause" the PC to connect to an Internet address.

-- One reason is that, if the "agent" running on the PC is in "user-controlled mode," as explained above, the "agent" awaits a signal from the user before connecting. Plainly, that signal is issued to the PC, as by a mouse or keyboard. The hand-held scanner is not involved.

-- Another reason is that, if the "agent" is in "automatic mode," as explained above, an Internet connection is made to the **first**

09/666,655
Art Unit 2623
8798

address on the "sorted list." But the sorting is done by the agent. The type of sorting is chosen by the user, and the user clearly makes the choice by ordinary input to the PC, as by using a mouse or keyboard.

Thus, Browning's hand-held scanner does not do any of the following: (1) determine the type of sorting, (2) thereby determine which address will stand at the top of the sorted list, and (3) "cause" a connection to the scanned address.

Claim 1 is "Means Plus Function" Type

Appellant submits that the recited "command input means" is not found in Browning. Appellant points out that this claim phrase is of means-plus-function type. As such, section 112 dictates how the claim phrase shall be interpreted:

. . .

An element in a claim for a combination may be expressed as a **means** . . . for performing a specified function without the recital of structure, material, or acts in support thereof,

and

such claim shall be construed to cover the corresponding structure, material, or acts

09/666,655
Art Unit 2623
8798

described in the specification and equivalents thereof.

Appellant points out that the Specification states that the hand-held device scans text, and also develops a command appropriate for the text. For example, if the text is a URL, the command would be to launch a browser. (Specification, page 7, bottom.) As another example, if the text is an e-mail address, the command would be an appropriate command, such as launching an e-mail program. (Specification, page 9, lines 21, 22.)

Then the scanned text is transmitted to the stationary terminal, which obeys the command, as by launching the browser and fetching the web page identified by the URL.

As the description of Browning, given above in connection with claim 2, indicates, there is no similar operation in Browning's hand-held scanner.

Response to Final Office Action

GREENBERG CASE

The Final Office Action, page 3, cites Greenberg v. Ethicon Endo-Surgery, Inc., 91 F3d 1580, 39 USPQ2d 1783 (Fed. Cir. 1996) for the proposition that

The fact that an element is in the "means plus function" format, that alone is not sufficient, in and of itself, to convert a claim element containing that term into a

09/666,655
Art Unit 2623
8798

means for performing a specified function within the meaning of 35 USC § 112, sixth paragraph.

(Final Action, paragraph bridging pages 2 and 3.)

However, Greenberg does not support this proposition, for several reasons.

Reason One

One reason is that the claim in Greenberg was not "means plus function" type. The claim used the term "detent mechanism." The patentee in Greenberg argued that "detent mechanism" should be interpreted as "detent **means**."

Thus, even if Greenberg supported the proposition set forth above, that proposition is not a "holding" of Greenberg, and thus is not precedent. That proposition is dicta, and is non-precedential. This will be explained.

Stated simply, the PTO asserts that the word "means" in a claim is not sufficient, by itself, to classify a claim as means-plus-function. But Greenberg did not involve a "means" claim. Greenberg stated that, on its facts, a "detent **mechanism**" would not be treated as a "detent **means**." Greenberg is distinguishable on its facts.

Stated in greater detail, the "holding" of a court decision is

- 1) limited to the facts of the case (and similar facts in later cases) and
- 2) includes all statements in the chain-of-logic leading to the court's conclusion.

Since the claim in Greenberg did not use the word "means," the facts of the case are not similar to those of this appealed case.

Also, the conclusion in Greenberg is that the "detent mechanism" claim element should **not** be classified as a "means-plus-function" element. Again, that reasoning, plus the facts, are not relevant to this appealed case.

The proposition for which Greenberg is cited is not a holding of the decision. That proposition is not needed to reach the Court's conclusion in Greenberg. The proposition, even if present in Greenberg, is dicta.

Reason Two

Greenberg does not contain the actual words of the proposition set forth above, nor the concept contained therein. The only relevant discussion in Greenberg is found in the third-to-last paragraph:²

² The undersigned attorney is using the court decisions downloaded directly from the CAFC's web site, through Georgetown University's Law School, in PDF format. These decisions do not utilize "star paging."

We do not . . . suggest that section 112(6) is triggered only if the claim uses the word "means." The Patent and Trademark Office has rejected the argument that only the term "means" will invoke section 112(6).

(Citations.)

Nonetheless . . . the term "means" (particularly . . . in the phrase "means for") generally invokes section 112(6) and . . . a different formulation does not.

In this case, because we have found no reason to depart from that general principle, we conclude that the phrase "cooperating detent mechanism defining conjoint rotation of said shafts in predetermined intervals" was not intended to invoke section 112(6) and should not be construed to do so.

Therefore, the proposition set forth by the PTO is not supported by Greenberg, and, in fact, Greenberg supports the opposite.

-- The PTO's proposition is, in essence, that the use of "means-plus-function" language is not conclusive.

-- Greenberg states the opposite, namely, that use of "means for" language raises a presumption that section 112(6) is being invoked.

ENVIRCO CASE

The Office Action, page 3, asserts that Enviro Corp. v.

09/666,655
Art Unit 2623
8798

Clestra Cleanroom, Inc., 209 F.3d 1360, 54 USPQ 2d 1449 (Fed. Cir. 2000) states that

. . . if the "means for" is modified by structure, material, or acts for achieving the specified function, then 35 USC § 112, sixth paragraph, is not invoked.

However, Enviroco does not support that proposition.

The issue in Enviroco was whether a claimed "second baffle means" invoked section 112(6).

The court stated that the use of the term "means" invokes a presumption that section 112(6) applies. (Paragraph 12.) However, the court stated that the presumption can be rebutted if the claim contains

sufficient structure or material . . . within the claim itself **to perform entirely the recited function**, the claim is not in means-plus-function format.

(Paragraph 12.)

In Enviroco, the claim language was this:

second baffle means disposed **radially outwardly** of said centrifugal fan means and said first baffle means,

said second baffle means **having inner surfaces for directing the airflow** from said centrifugal fan means inwardly of said primary housing and **between said first baffle means and said filter means**

09/666,655
Art Unit 2623
8798

whereby air being introduced into said housing by said centrifugal fan means will be directed radially outwardly of said centrifugal fan means and guided by said first baffle means towards said second baffle means and thereafter by said second baffle means between said first baffle means and said air filter means.

The court held that the **highlighted** recitations above set forth **structure** which precluded classification as means-plus-function.

Therefore, Enviroco can be summarized as stating that, even if "means for" language is used, if sufficient type of structure is recited in the claim, the claim will not be classified as means-plus-function type.

In the present appeal, the claim language in question is

command output means for uploading
address information from the device to the
terminal and causing the terminal to connect
to the addressed resource.

There is no structure recited, as in Enviroco. Thus, Enviroco does not force the conclusion that claim 1 is not a means-plus-function claim.

Further, Appellant points out that the Office Action applies the wrong test. The Office Action asserts that

. . . the phrase "command output" itself imparts an act or structure which supports the limitation, thereby modifying the "means for"

09/666,655
Art Unit 2623
8798

phrase by an act or structure which supports
the limitation,

thereby modifying the "means for" phrase by an
act or structure for achieving the specified
function.

(Final Office Action, page 3, line 9 et seq.)

That is not the test set forth by Enviroco. The test was given
above, and is repeated here. The Enviroco court stated that the
presumption of means-plus-function classification can be rebutted
if the claim contains

sufficient structure or material . . . within
the claim itself **to perform entirely the
recited function**, the claim is not in means-
plus-function format.

(Paragraph 12.)

Thus, sufficient structure must be present "to perform
entirely the recited function."

The Office Action relies on the phrase "command output means"
alone.

Appellant asks, If that language ("command output means")
denotes **structure** sufficient to "perform entirely the recited
function," then what is the function set forth by the language
"command output means" ?

That is, if a person skilled-in-the-art heard the phrase
"command output means," how does that person interpret the

09/666,655
Art Unit 2623
8798

phrase ?

As a minimum, the PTO must show that, when a person skilled-in-the-art hears the phrase "command output means," that person then conjures up the rest of the claim phrase. No such showing has been made, and such a showing is highly doubtful.

In addition, Appellant submits that the PTO mis-interprets the phrase "command output means." "Command output" is merely a label, for reference by other claims. (See claims 20 and 21.)

As such, the label is no different from "first means" or "means A."

ATMEL CASE

The Final Office Action, page 3, asserts that, even if the claim language in question is means-plus-function type, Appellant commits error by, in effect, incorporating into the claim an embodiment of the Specification which corresponds to the claim language. The Office Action cites *Atmel Corp. v. Information Storage Devices, Inc.*, 198 F3d 1374, 53 USPQ2d 1225 (Fed. Cir 1999) for its position.

However, Atmel does not support this proposition. Atmel is entirely concerned with enablement, and written description, issues.

In Atmel, the main issue related to a claim which recited a "high voltage generating means" which generated a high voltage from

09/666,655
Art Unit 2623
8798

a low voltage. Atmel's Specification (1) showed a "black box" in the drawings representing this "means," (2) asserted that it is well-known in the art how to construct such a "means," and (3) cited a journal article in support.

The court in Atmel held that (1) the evidence submitted that the journal article was sufficient to explain how to construct the "means" was un rebutted, so that (2) the article is deemed as sufficiently enabling.

Atmel does not support the proposition for which the PTO cites it. Further, the PTO is citing Atmel for a proposition which is **directly contrary** to section 112, which states:

An element in a claim for a combination
may be expressed as a means . . . for
performing a specified function

. . .
and such claim shall be construed to cover the
corresponding structure, material, or acts
described in the specification and equivalents
thereof.

Thus, section 112 states that the means-plus-function language of claim 1 "[covers] the corresponding structure, material, or acts described in the specification and equivalents thereof." The Browning reference does not disclose that corresponding subject matter.

Under the explicit language of claim 1, the "command output means" is part of the "hand-held control device."

09/666,655
Art Unit 2623
8798

FINAL ACTION, PAGE 4, SECTION 3

That section asserts that Browning shows the "command output means" of claim 1, and relies on the fact that Browning launches a browser. However, as explained above, Browning's hand-held scanner does not "cause" that launching, contrary to claim 1. And the mere fact that a browser was launched does not show the claimed "command output means."

FINAL ACTION, PAGE 4, SECTION 4

This section asserts that Appellant's Specification sets forth alternate embodiments. That may be so.

But the Final Action has still failed to show how those alternates read on subject matter in Browning, as required by section 112.

FINAL ACTION, PAGE 5, SECTION BEGINNING
"On page 6, next to last paragraph "

This section still does not show the recited "command output means" of claim 1.

FINAL ACTION, PAGE 5, SECTION BEGINNING
"On page 6, last paragraph "

The issue is a question of law, for the Board to decide, namely, whether a specific description in the Specification

09/666,655
Art Unit 2623
8798

corresponds to the "command output means" of claim 1.

In addition, the Final Action asserts that, if this description does not apply "only" to the "command output means," then Appellant's argument is thereby defeated. But no support has been given for this proposition. Support is required, such as a court decision or regulation.

Conclusion as to Claim 1

The "command output means" of claim 1 has not been shown in Browning.

-- Browning's hand-held scanner does not "cause" his PC to connect to the Internet.

-- Under section 112, the "corresponding structure etc." of Appellant's Specification has not been shown in Browning.

RESPONSE TO 102 - REJECTION OF CLAIMS 23, 24, 40, and 41

Applicant acknowledges the rejections. However, the claims have not been cancelled because claims depending on these claims have been appealed.

RESPONSE TO 103 - REJECTION OF CLAIMS 4, 5, 30, and 31

These claims were rejected as obvious, based on Browning and Tanaka.

Claim 4

Claim 4 recites:

4. A device according to claim 3,
further including

means for appending the application launch
code to the address information before upload
to the terminal.

The Office Action relies on Tanaka, column 1, lines 30, 31,
to show the "means" of claim 4. However, several problems exist
in this reliance. But before setting forth the problems, Appellant
will explain what Tanaka is talking about.

Tanaka Reference

Tanaka discusses a computer network, having computers which
communicate on the network using modems. Tanaka discusses a "loop
test," in which inquiry is made as to whether a "loop," or
communication link is present between two selected modems.

To perform the loop test, Tanaka has one modem send a message
to a selected other modem. The message contains a command, such
as, in effect, "Tell me that you received this message."

However, since all modems are connected to the network, they
all receive the message. How does the selected modem respond to
the message, and the others remain silent ?

09/666,655
Art Unit 2623
8798

Tanaka gives each modem an address. The passage relied on by the PTO to show claim 4 states that the address is placed into the message.

Problem 1

Tanaka is non-analogous art. Nobody designing the scanner of claim 4 would look to Tanaka to for design assistance.

Tanaka is concerned with telephone modems.

MPEP § 2141.01(a) states:

Analogous and Nonanalogous Art

TO RELY ON A REFERENCE UNDER 35
U.S.C. 103, IT MUST BE ANALOGOUS
PRIOR ART

. . . In order to rely on a reference as a
basis for rejection of an applicant's
invention, the reference must either be

in the field of applicant's endeavor

or, if not,

then be reasonably pertinent to the particular
problem with which the inventor was concerned.

Problem 2

Under the parent claims, the "launch code" is "suitable to launch an application³ on the terminal appropriate to the nature of

³ "Application" is present-day computer jargon for "computer program."

09/666,655
Art Unit 2623
8798

the addressed resource."

An example was given in the Summary of Invention, above: if the "addressed resource" is a web site, then the "application" to be launched is a web browser. The "launch code" causes launch of that browser.

Thus, under claim 3, a correspondence exists between (1) the type of addressed resource and (2) the launch code. Further, the "launch code" has the property of causing a computer program to be launched.

Tanaka's "commands" are plainly the commands of the so-called "instruction set" of the modems. That is, a modem is designed to respond to a group of commands. For example, one command will instruct the modem to answer an incoming call. Another command will tell the modem to ignore incoming calls.

A few pages from the Technical Reference for Hayes Modem Users is attached as APPENDIX A to illustrate general principles.

But the "commands" of Tanaka do not correspond to the claimed "launch code."

-- Tanaka's "commands" are plainly taken from the command set for which the modems are designed. They do not cause "applications" to be "launched."

-- The "launch code" of claim 4 causes a computer program (an "application") to be

09/666,655
Art Unit 2623
8798

launched.

Problem 3

The "address" of claim 4 does not correspond to the "addresses" in Tanaka.

The address of claim 4 is an address of a "resource," such as a web site on the Internet.

The address of Tanaka is the address of a modem. A modem is not a "resource."

Problem 4

Another lack of correspondence is found in parent claim 1, which states that the "address" is obtained by scanning, using a hand-held device. (The user scans a wand over the printed address, such as a web site.) No such derivation of the address in Tanaka is found.

Problem 5

Claim 4 states that the "appending" of the "address" to the "launch code" is done "before upload to the terminal."

There is no "upload to the terminal" in Tanaka. There is transfer of modem commands to a specific, addressed modem. But that addressed modem is not a "terminal."

That is not only self-evident, but proven by parent claim 3,

09/666,655
Art Unit 2623
8798

which states that the "terminal" "launches" an "application."
Tanaka's modems do not "launch" "applications."

No Teaching Given for Combining References

The rationale given is that

. . . the particular program to be launched is associated with the address information, and appending would allow more efficient launching of the application.

(Final Office Action, page 14, last paragraph.)

However, several problems exist in this rationale.

PROBLEM 1

The rationale contains a false statement. In Tanaka, there is no "program to be launched" which is "associated with the address information." Instead, a **modem command** is "associated with the address information."

And, as stated above, the "address information" in Tanaka does not correspond to claim 4.

PROBLEM 2

The stated goal of attaining "more efficient launching" has several of its own problems.

09/666,655
Art Unit 2623
8798

SUB-PROBLEM 2A

What does that mean ? That is, how does one determine whether one specific "launching" is more efficient than another ?

The statement lacks meaning. Statements lacking meaning cannot be used as a rationale for combining references.

SUB-PROBLEM 2B

No evidence has been given showing that the "launching" obtained by combining Browning with Tanaka is actually "more efficient" (whatever that means).

SUB-PROBLEM 2C

No basis of comparison has been given by which the presence or absence of greater "efficiency" in the combined references can be determined. That is, "more efficient" than what ?

PROBLEM 2D

Even if "more efficient" launching is attained, that is not a basis for rejection of claim 4.

The rejection merely sets forth a supposed characteristic of the references, but **after combining them**. A teaching for combining the references in the first place is required.

09/666,655
Art Unit 2623
8798

ADDITIONAL PROBLEM

The Final Office Action, bottom of page 14, offers an additional rationale, namely, that "it would be obvious to append this before upload to the terminal to alleviate processing by the terminal."

Appellant respectfully submits that this rationale must contain typographical errors, because it makes no conceptual sense.

First, Appellant repeats that no "terminal" in Tanaka is involved. A modem transmits a modem command to another modem.

Given that, why would the receiving modem append an address to the command? The receiving modem is the target of the command. The Office Action has not shown that the receiving modem re-transmits the command to another modem (wherein an address may be needed). Nor has it shown how that re-transmission corresponds to claim 4.

Nor has it shown how, even if re-transmission occurs, how the address of the modem to which the re-transmission is sent can be determined by the original modem.

Thus, the Office Action is asserting that something is obvious, because it is better than a stated alternative.

But the stated alternative does not exist.

Such a rationale cannot be a basis for an obviousness rejection.

09/666,655
Art Unit 2623
8798

ANOTHER ADDITIONAL PROBLEM

The Final Action, page 7, second paragraph, asserts that, for an obviousness rejection, the PTO only must provide a motivation for combining the references. That is not correct.

For example, that motivation must be shown in the prior art, or it must be shown that a person skilled in the art would use that motivation. Merely providing a motivation is insufficient. The latter point is proven by the fact that an Applicant's own Specification may provide the motivation. But that motivation cannot be used.

As another example, it must be shown that the motivation leads to the claimed invention.

As another example, a reasonable expectation of success must be shown.

MPEP § 706.02(j) sets forth some of the requirements.

Further, the PTO's position on this point is contrary to the CAFC decision of Dembiczak, discussed below.

Claim 5

Claim 5 recites:

5. A device according to claim 4,
further comprising

means for storing the address information with
an associated application launch code until
upload to the terminal.

09/666,655
Art Unit 2623
8798

No Hand-Held Device Shown

Appellant points out that, ultimately, claim 5 depends from claim 1. Thus, the "storage" of claim 5 occurs in the "hand-held" "device" of claim 1. The PTO has not shown how the modems of Tanaka correspond to the "hand-held" "device."

Claim 5 not Shown in References

The subject matter of claim 5 has not been shown in the references. The sole discussion of Tanaka on this point is the following:

In the Tanaka reference . . . the address is appended to the command data. Thus, once it is uploaded, it is no longer stored.

(Final Office Action, page 15, first paragraph.)

But that does not show claim 5. MPEP § 2143.03 states:

To establish prima facie obviousness . . . **all the claim limitations** must be taught or suggested by the prior art.

No Temporary Storage Shown

The First Office Action, page 7, stated:

Regarding claim 5, Browning also does not disclose means for storing the address information with an associated application

09/666,655
Art Unit 2623
8798

launch code until upload to the terminal.

The Examiner takes Official Notice that storing address information with associated launch code is well known in the art.

It would have been obvious to do this, to provide quick launching of the application, as by use of a lookup table for example.

Appellant responded, in his previous response, by stating:

In response to the invocation of Official Notice, the undersigned attorney respectfully traverses the Official Notice, and requests a citation of evidence showing the recited temporary storage. (See MPEP § 2144.03.)

The Final Action responds by stating:

. . . the claim does not recite "temporary storage"

and

the Examiner did not take Official Notice of "temporary storage."

Appellant points out that "temporary storage" is clearly a short-hand term used for simplicity to refer to the claim language "storing the address information . . . **until** upload to the terminal." Since the "address information" is stored "**until**" an event, that storage is **temporary**.

Further, the First Office Action has admitted that Browning does not show a specific recitation of claim 5, and that admission,

09/666,655
Art Unit 2623
8798

given above, is repeated:

Browning also does not disclose means for storing the address information with an associated application launch code until upload to the terminal.

Now the Final Action asserts that Official Notice was never taken of "temporary storage."⁴

If so, then the recitation in question, in the passage cited two paragraphs ago, has not been shown, nor Noticed, in the prior art.

THEREFORE, the recitation of claim 5, regarding storage "until" an event, has not been shown, nor Noticed, in the prior art.

No Teaching Given for Combining References

No rationale at all has been given for combining the (non-existent) subject matter in Tanaka which supposedly corresponds to claim 5 with Browning. A teaching is required.

The supposed teaching given for combining Tanaka with Browning in connection with claim 4 is insufficient. There is no rule stating that, once a reference is combined with another, then the PTO is free to pick-and-choose elements from the references, and

⁴ The First Action, page 7, Noticed "that storing address information with associated launch code is well known in the art."

combine those references.

Claim 30

The discussion above, with respect to claim 4, applies here.
Appellant repeats that

- the "address" of claim 30 does not correspond to the address in Tanaka,
- the "launch code" of claim 30 launches an "application," which does not occur in Tanaka,
- there is no "upload to" a "terminal" in Tanaka,
- the claimed "address" originates in a scanning operation performed by a used, and that is not found in Tanaka, and
- the operations of parent claim 27 are not found, even if the references are combined.

As to the last point, Appellant points out that, in parent claim 27, the "address" of a "resource" is "uploaded" to the "terminal," and the "terminal" connects to the "address."

Tanaka's modem, which the PTO treats as the "terminal," does not connect to the "address" in Tanaka. In fact, that would make no sense. The "address" refers to the modem which receives that address-and-modem-command.

Thus, the subject matter of parent claim 27 has not been shown

09/666,655
Art Unit 2623
8798

in the references.

Claim 31

The discussion of claim 5, given above, applies to claim 31. Appellant repeats that the subject matter of claim 5 has not been shown in Tanaka, and thus the rejection cannot stand. Similarly, the subject matter of claim 31 has not been shown in Tanaka.

RESPONSE TO 103 - REJECTION OF CLAIMS 6, 8 - 15, AND 33 - 34

These claims were rejected as obvious, based on Browning and Kasabach.

CLAIM 6

Claim 6 depends from claim 1, and both are set forth here:

1. A hand-held control device for controlling a terminal connectable by a communications network to an addressed resource, the device comprising:

address input means for scanning a text address of the resource;

and

command output means for uploading address information from the device to the terminal and causing the terminal to connect to the addressed resource.

6. A device according to claim 1, further comprising

09/666,655
Art Unit 2623
8798

control means responsive to the orientation
and/or movement of the device.

No Teaching Given

No teaching has been given in support of the combination of references. The rationale given is that "greater functionality and versatility" are obtained by the combination. However, that is not a teaching, for several reasons.

Reason 1

One reason is that the rationale merely sets forth supposed characteristics of two references, after being combined. But characteristics of a combination do not qualify as a teaching for making the combination in the first place.

Reason 2

Another reason is that "greater functionality and versatility" would seem to be obtained by using Browning and Kasabach **separately**. The PTO has not shown how combining parts of them **into a single unit** provides still greater functionality etc.

The Final Action, page 8, second paragraph, asserts that, in essence, the goal is to add this supposed advantage to Browning, not to attain this advantage.

This is a highly unusual, if not invalid, proposition. That

09/666,655
Art Unit 2623
8798

is, the Final Action is asserting that the teaching under section 103 is to add a specific feature to a specific patent.

Appellant requests a citation of authority in support of this proposition.

Reason 3

A third reason is that "greater functionality and versatility" is a naked conclusion, unsupported by evidence. Evidence is required. For example, what is the standard of comparison ? That is, how does one determine whether, in fact, "functionality and versatility" are actually increased ?

Reason 4

A fourth reason is that "greater functionality" appears to be a meaningless phrase. Does that mean that more "functions" are now present in Browning's device, as modified ? If so, why is that desirable, and where is a teaching so stating ? Or does it mean that "bigger" (as in "greater" or "more significant") functions can now be accomplished ?

Fifth Reason

A fifth reason is that the rationale does not follow the CAFC's decision of In re Dembiczak, 175 F. 3d 994, 50 USPQ2d 1614

09/666,655
Art Unit 2623
8798

(Fed. Cir. 1999).

In brief, Dembiczak states that

- **objective evidence** of a teaching for combining references must be provided;
- the Examiner's speculation does not qualify as objective evidence;
- numerous sources can provide a teaching to combine references;
- knowledge of one skilled in the art can act as a source;
- however, THE RANGE OF SOURCES AVAILABLE DOES NOT DIMINISH THE REQUIREMENT FOR ACTUAL EVIDENCE;
- broad conclusory statements by the Examiner do not qualify as evidence; and
- "particular factual findings" as to the teaching are required, and gives reasons why **facts** are necessary.

The Office Action has not shown "objective evidence" nor "particular factual findings" that the prior art suggests that a pursuit of "greater functionality and versatility" leads to the combination of references.

09/666,655
Art Unit 2623
8798

Additional Point

The Final Action, page 8, second paragraph, asserts that another reason justifying the combination is that

. . . allowing the control means to be responsive to the orientation and/or movement of the device as taught by Kasabach would facilitate determining the position of the writing tip despite movement, and allow compensation for error in position determination.

However, several problems exist in this assertion.

Problem 1

The assertion asserts that response to movement of something allows determination of position of that thing. That is a false statement.

For example, I may stand on a switch, and thereby close it. If I move, the switch will open (ie, respond). But that response does not determine where I now am located, after moving.

Problem 2

The assertion is a naked conclusion. The assertion has not explained **how** the error compensation occurs. Or even what the errors would be.

09/666,655
Art Unit 2623
8798

No Expectation of Success Given

Kasabach shows a stylus 12 for use with a digitizing tablet. That is, he shows a computer input device which resembles a pen-and-paper.

The Office Action substitutes Kasabach's stylus 12 for the scanner 10 of Browning.

But the Office Action fails to explain how Browning is now modified to deal with Kasabach's stylus 12. No expectation of success has been shown.

MPEP § 706.02(j) states:

Contents of a 35 U.S.C. 103 Rejection

. . .

To establish a prima facie case of obviousness, three basic criteria must be met.

. . .

Second, there must be a **reasonable expectation of success**.

. . .

The . . . reasonable expectation of success must . . . be found in the prior art and not based on applicant's disclosure.

From another point of view, the rejection is incomplete. In order for Kasabach to be successfully combined with Browning, as a minimum, some software driver is required. That driver has not been shown in the prior art, nor has a teaching been given for

09/666,655
Art Unit 2623
8798

combining it with the references.

Combination Defeats Browning's Purpose

With the substitution of Kasabach's stylus into Browning, Browning can no longer scan and perform OCR on the text which he formerly scanned. He can no longer accomplish his intended purpose.

MPEP § 2143.01 states:

THE PROPOSED MODIFICATION CANNOT RENDER THE
PRIOR ART UNSATISFACTORY FOR ITS INTENDED
PURPOSE

If proposed modification would render the
prior art invention being modified
unsatisfactory for its intended purpose, then
there is no suggestion or motivation to make
the proposed modification.

CLAIM 8

Claim 8 recites:

8. A device according to claim 6,
wherein the control means includes an
accelerometer or an array of accelerometers
arranged to sense orientation or movement of
the device.

The Final Office Action, page 16, asserts that Kasabach shows accelerometers. However, no teaching has been given for combining the accelerometers of Kasabach with Browning.

09/666,655
Art Unit 2623
8798

The Office Action apparently presumes that, once a teaching has been given for combining two references for one purpose (namely, attaining claim 6, which has not actually been attained), then the PTO is free to pick-and-choose elements at will, in making further combinations.

That is not so.

Further, the substitution of Kasabach's device into Browning, even with the accelerometers, still has the defects identified above. Browning is rendered inoperative, and no expectation of success has been shown.

Further still, Kasabach is fundamentally different from Browning. Browning initiates scanning, through a switch actuated by the user, while the user moves the scanner. (Column 2, lines 27 - 33.) He has no need for accelerometers to detect the motion.

And Kasabach uses the accelerometers for a completely different purpose. Kasabach uses the accelerometers to infer changes in position, in order to detect the location of the stylus. Browning has no need for that.

The PTO has given no explanation of why Browning would use the accelerometers of Kasabach.

Claim 9

Claim 9 recites:

09/666,655
Art Unit 2623
8798

9. A device according to claim 8, wherein the control means is arranged to sense movement of a head end of the device when the device is used as a writing instrument.

The discussion of claims 6 and 8 apply here.

No teaching has been given for use of Browning's scanner as a writing instrument. If Kasabach's stylus is substituted into Browning as a writing instrument, then Browning is rendered inoperative, no expectation of success has been given, and the missing elements (eg, software driver) have not been shown.

In addition, it is plain that hindsight is being used to combine the references. If you want a writing instrument, then use Kasabach's device. (See column 2, top.) Plainly, claim 9 is the source of combining the references, since Kasabach, by himself, shows a writing instrument.

Claim 10

Claim 10 recites:

10. A device according to claim 6, wherein the control means activates a function in accordance with the orientation or movement of the device.

The Final Office Action, page 16, sets forth the naked conclusion that Kasabach shows claim 10. That is insufficient as a basis for rejection.

09/666,655
Art Unit 2623
8798

First, the subject matter, if any, in Kasabach which corresponds to claim 10 must be identified. Then a teaching for combining that subject matter with the other references must be given. Neither has been done.

As to subject matter, the Final Office Action relies on Kasabach, column 6, lines 66, 67 to show claim 10. However, that location, and the following text, states that Kasabach performs character recognition in order to develop commands. Kasabach gives an example: if the user writes "send" with the stylus, then Kasabach performs the "send" function.

That does not correspond to claim 10. Appellant points out that claim 10 recites a "means." Under section 112,

. . . such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Appellant's Specification does not disclose using OCR to interpret a moving, writing stylus, held in a hand, and then produce a command corresponding to the writing interpreted.

Claim 11

Claim 11 recites:

11. A device according to claim 6, wherein the control means activates a function in accordance with a predetermined sequence of

09/666,655
Art Unit 2623
8798

orientations or movements of the device.

The Final Office Action, page 16, sets forth the naked conclusion that Kasabach shows claim 11. That is insufficient as a basis for rejection.

First, the subject matter, if any, in Kasabach which corresponds to claim 11 must be identified. Then a teaching for combining that subject matter with the other references must be given. Neither has been done.

As to subject matter, the Final Office Action relies on essentially the same part of Kasabach as in rejecting claim 10. However, that part states that Kasabach performs character recognition in order to develop commands. Kasabach gives an example: if the user writes "send" with the stylus, then Kasabach performs the "send" function.

That does not correspond to claim 10. Appellant points out that claim 10 recites a "means." Under section 112,

. . . such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Appellant's Specification does not disclose using OCR to interpret writing, and then produce a command corresponding to the writing interpreted.

Further, Appellant points out that character recognition does

09/666,655
Art Unit 2623
8798

not rely on a "predetermined sequence" of "movements" as recited in claim 11. Different people write the same alphabetical letters in different ways. But the differently shaped symbols representing a given letter are nevertheless interpreted by a good OCR system as the correct letter.

Further still, Kasabach does not explain exactly how he derives the commands from the letters in question. It is reasonable to presume that he operates like a standard OCR system. That is, he first develops a digital image of the letters drawn by the stylus. Then he performs character recognition on the digital image.

That does not correspond to either claim 10 or 11. One reason is that the "commands" derived by Kasabach are actually derived from the digital image, not from the movement of the stylus.

Claim 12

Claim 12 recites:

12. A device according to claim 1,
wherein a head end of the device includes a
stylus.

The Final Office Action, page 16, sets forth the naked conclusion that Kasabach shows claim 12. That is insufficient as a basis for rejection.

First, the subject matter, if any, in Kasabach which

09/666,655
Art Unit 2623
8798

corresponds to claim 12 must be identified. Then a teaching for combining that subject matter with the other references must be given. The latter has not been done.

Claim 13

Claim 13 recites:

13. A device according to claim 12,
wherein the stylus is retractable.

The Final Office Action, page 16, sets forth the naked conclusion that Kasabach shows claim 13. That is insufficient as a basis for rejection.

First, the subject matter, if any, in Kasabach which corresponds to claim 13 must be identified. Then a teaching for combining that subject matter with the other references must be given. The latter has not been done.

The Final Office Action argues that Kasabach "inherently" shows a retractable tip. Even if that be true, that is not relevant. Kasabach also shows other items which are **not** retractable, such as "a marker and chalk." (Column 3, line 4.)

The PTO must provide a teaching for selecting the retractable item over the non-retractable ones. That has not been done.

09/666,655
Art Unit 2623
8798

Claim 14

Claim 14 recites:

14. A device according to claim 1, further comprising means for generating a text file as a user writes with the device.

The Final Office Action, page 16, sets forth the naked conclusion that Kasabach shows claim 14. That is insufficient as a basis for rejection.

First, the subject matter, if any, in Kasabach which corresponds to claim 14 must be identified. Then a teaching for combining that subject matter with the other references must be given. The latter has not been done.

Claim 15

Claim 15 recites:

15. A device according to claim 1, further comprising means for generating a graphics file as a user writes or draws with the device.

The Final Office Action, page 16, sets forth the naked conclusion that Kasabach shows claim 15. That is insufficient as a basis for rejection.

First, the subject matter, if any, in Kasabach which corresponds to claim 15 must be identified. Then a teaching for combining that subject matter with the other references must be

09/666,655
Art Unit 2623
8798

given. The latter has not been done.

The Office Action asserts that mere storage of drawings in Kasabach shows storage of a "file." However, that is not so.

Point 1

"File" is a term-of-art in computer architecture. "File" implies that the data of which the drawing is composed is associated with a "name," and can be located using that name. Two examples will illustrate this.

Assume that a given drawing consists of 1,000 bytes of data, each byte representing location of a pixel. Thus, this drawing consists of 1,000 dots. One way to store the drawing is to store the bytes at memory addresses 1500 - 2499. Then you could store another drawing at some other memory addresses, and so on.

Another way to store the drawing is to use a File Allocation Table, FAT, as the operating system DOS does. The FAT contains a name for each drawing, and the location (the memory address) of the first chunk of bytes for the drawing. If more than one chunk of bytes is needed, each chunk contains a "pointer" which indicates the location of the next chunk. The last chunk may contain an indicator that it is the last one.

Therefore, the term "file" is a term-of-art, implying that the file has a name, and can be stored and retrieved by name. In addition, other processes can be performed, based on the name of

09/666,655
Art Unit 2623
8798

the file, such as printing, erasing, copying, etc.

Consequently, the mere reference to storage of a drawing in Kasabach does not imply that the storage is done according to a file-type format. Rather, Kasabach simply means that a bunch of data is written into memory, in a simple microprocessor system.

Point 2

"Files" are organizational approaches to handling groups of data in an "operating system." "Windows" represents an operating system, as does Unix, and so on.

Kasabach shows a simple microprocessor system. He does not appear to show an "operating system." Thus, he does not use the file-concept, and the naming processes which a file-concept implies.

Claim 33

The Final Office Action, page 17, sets forth the naked conclusion that Kasabach shows claim 33. That is insufficient as a basis for rejection.

First, the subject matter, if any, in Kasabach which corresponds to claim 33 must be identified. Then a teaching for combining that subject matter with the other references must be given. The latter has not been done.

The discussion above, given with respect to claim 6, is hereby

09/666,655
Art Unit 2623
8798

repeated by reference.

Claim 34

The Final Office Action, page 17, sets forth the naked conclusion that Kasabach shows claim 34. That is insufficient as a basis for rejection.

First, the subject matter, if any, in Kasabach which corresponds to claim 34 must be identified. Then a teaching for combining that subject matter with the other references must be given. The latter has not been done.

The discussion above, given with respect to claim 9 and 14, is hereby repeated by reference.

RESPONSE TO 103 - REJECTION OF CLAIM 7

Claim 7 was rejected as obvious, based on Browning, Kasabach, and Shriver. Claim 7 recites:

7. A device according to claim 6, wherein the control means includes a tilt switch or an array of tilt switches arranged to sense orientation of the device.

The rationale given by the PTO for adding Shriver's tilt switch is to "sense orientation."

However, neither Kasabach nor Browning have a need for sensing orientation. Plainly, Appellant's own Specification is being used

09/666,655
Art Unit 2623
8798

as a teaching for combining references.

Further, no expectation of success has been shown. Appellant requests that the PTO explain, by way of Examiner's Answer, what Kasabach and Browning do with the tilt switch of Shriver.

Further still, Kasabach states (bottom of column 4, top of column 5) that his accelerometers can deduce "roll, pitch, and yaw." That includes "tilt." Thus, there is no need for the addition of the tilt switches of Shriver. Kasabach already detects tilt.

Still further, the claimed "tilt switch" has not been shown in the prior art. MPEP 2143.03 states:

To establish prima facie obviousness . . . **all the claim limitations** must be taught or suggested by the prior art.

Furthermore, the Office Action relies on "tilt switches" for "sensing orientation." However, the Office Action has not shown "sensing orientation" in Kasabach. Thus, the Office Action is selecting prior art, based on Applicant's claim, which is hindsight. That is, Applicant's claim recites sensing orientation, and is plainly the motivation for the Office Action to cite "tilt switches."

RESPONSE TO 103-REJECTION OF CLAIM 17

Claim 17 recites:

09/666,655
Art Unit 2623
8798

17. A device according to claim 16,
wherein

(i) the address input means includes a
scanner, and

(ii) the head end defines a surface that is
obliquely angled to the longitudinal axis of
the barrel such that the surface including the
scanner is presented flat to a surface
containing an item to be scanned.

Response to Rejection

The rejection, in essence, is base on "design choice."
However, "design choice" is based on the rationale that the claimed
invention merely substitutes one known element for an equivalent
element. That is not so in this case.

The claimed oblique angle provides the operating feature that
the scanner can be held like a pencil. As Figure 2 indicates, if
the scanning surface is parallel with the image-to-be-scanned, then
the body of the scanner can stand at an angle, like a pencil.

That is not true of all angles, nor of all positioning of the
scanning surface.

From another point of view, the rejection, in essence, is
asserting that Applicant merely chose one of several known
equivalents. Applicant thus points to MPEP § 2144.06, which
states:

In order to rely on equivalence as a rationale
supporting an obviousness rejection, the

09/666,655
Art Unit 2623
8798

equivalency must be recognized in the prior art, and cannot be based on . . . the mere fact that the components at issue are functional or mechanical equivalents.

Applicant requests that the recognized equivalency be shown in the prior art.

From yet another point of view, MPEP § 2144(f) states:

C. Rearrangement of Parts

. . .

However, "The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is **not by itself sufficient** to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." [Citation.]

Applicant requests that a motivation be provided.

Response to Final Action

POINT 1

The Final Action, page 8, in effect, is asserting that Appellant is arguing features not contained in the claim.

However, Appellant submits that the Office Action is missing the real issue. The issue is what device do the references, when combined ? That is an actual device, not a set of words.

If that device cannot be held like a pencil, then the language

09/666,655
Art Unit 2623
8798

of claim 17 does not cover it.

POINT 2

The Office Action argues that the "oblique" aspect of the claim is well known, and cites Olschafskie.

However, that is contrary to Browning, who shows a right-angle mounting. Thus, the cited reference is contrary to Browning.


Point 3

No teaching has been given for combining Olschafskie with Browning.

CONCLUSION

Appellant requests that the Board overturn the rejections, and pass all claims to issue.

Respectfully submitted,


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ATTACHMENTS: (1) APPEALED CLAIMS
(2) PAGES FROM HAYES TECHNICAL REFERENCE

APPEALED CLAIMS

1. A hand-held control device for controlling a terminal connectable by a communications network to an addressed resource, the device comprising:

address input means for scanning a text
address of the resource;

and

command output means for uploading address
information from the device to the terminal
and causing the terminal to connect to the
addressed resource.

2. A device according to claim 1, further comprising
recognition means for recognizing the nature
of the addressed resource from the format of
the scanned text address.

3. A device according to claim 2, further comprising
means for retrieving an application launch
code suitable to launch an application on the
terminal appropriate to the nature of the
addressed resource.

4. A device according to claim 3, further including

means for appending the application launch code to the address information before upload to the terminal.

5. A device according to claim 4, further comprising means for storing the address information with an associated application launch code until upload to the terminal.
6. A device according to claim 1, further comprising control means responsive to the orientation and/or movement of the device.
7. A device according to claim 6, wherein the control means includes a tilt switch or an array of tilt switches arranged to sense orientation of the device.
8. A device according to claim 6, wherein the control means includes an accelerometer or an array of accelerometers arranged to sense orientation or movement of the device.
9. A device according to claim 8, wherein the control means is arranged to sense movement of a head end of the device when the device is used as a writing instrument.

10. A device according to claim 6, wherein the control means activates a function in accordance with the orientation or movement of the device.

11. A device according to claim 6, wherein the control means activates a function in accordance with a predetermined sequence of orientations or movements of the device.

12. A device according to claim 1, wherein a head end of the device includes a stylus.

13. A device according to claim 12, wherein the stylus is retractable.

14. A device according to claim 1, further comprising means for generating a text file as a user writes with the device.

15. A device according to claim 1, further comprising means for generating a graphics file as a user writes or draws with the device.

16. A device according to claim 1, further comprising a head end and an elongate barrel terminating distally in the head end to provide a generally pen-like size and shape.

17. A device according to claim 16, wherein (i) the address input means includes a scanner, and (ii) the head end defines a surface that is obliquely angled to the longitudinal axis of the barrel such that the surface including the scanner is presented flat to a surface containing an item to be scanned.

18. A device according to claim 1, further comprising means for storing a plurality of resource addresses.

19. A device according to claim 18, further comprising
(i) means for displaying all of the stored resource addresses, and
(ii) means for selecting an appropriate one of the stored and displayed resource addresses.

20. A device according to claim 1, wherein the command output means uploads information to the terminal by wireless transmission.

21. A device according to claim 20, wherein the command output means includes an IR or RF transmitter.

22. A device according to claim 1, further comprising display means for providing a confirmatory display of a scanned address.

23. A hand-held control device for controlling a terminal, the device comprising:

command output means for uploading a text or graphics file from the device to the terminal;
sensor means for sensing movement of the device when the device is used as a writing or drawing instrument; and
means for generating the text or graphics file as a user writes or draws with the device.

24. A device according to claim 23, connectable by a communications network to an addressed resource, wherein the command output means includes means for causing the terminal to connect by a communications network to an addressed resource and to convey the text or graphics file as message information to that resource.

25. A system comprising:

a hand-held control device for controlling a terminal connectable by a communications network to an addressed resource, the device including

(i) address input means for scanning a

text address of the resource, and
(ii) command output means for uploading
address information from the device to
the terminal and causing the terminal to
connect to the addressed resource; and
a terminal for downloading address information
from the device.

26. A system according to claim 25, wherein the terminal
includes

means for recognizing, verifying and acting
upon command data.

27. A method of controlling a terminal connectable by a
communications network to an addressed resource, the method
comprising:

scanning a text address of the resource;
uploading address information to the terminal; and
causing the terminal to connect to the
addressed resource.

28. A method according to claim 27, further comprising
recognizing the nature of the addressed
resource from the format of the scanned text
address.

29. A method according to claim 28, further comprising retrieving an application launch code suitable to launch an application on the terminal appropriate to the nature of the addressed resource.
30. A method according to claim 29, further comprising appending the application launch code to the address information before upload to the terminal.
31. A method according to claim 30, further comprising storing the address information with an associated application launch code until upload to the terminal.
32. A method according to claim 27, further comprising controlling the terminal by a hand-held device that scans the resource address and uploads resource address information to the terminal.
33. A method according to claim 32, further comprising controlling the hand-held device by orientation and/or movement of the device.

34. A method according to claim 32, further comprising using the device as a writing instrument and sensing movement of the device to generate a message file.
35. A method according to claim 27, further comprising uploading information to the terminal by wireless transmission.
36. A method according to claim 27, further comprising providing a confirmatory display of a scanned address.
37. A method according to claim 27, wherein the terminal recognizes, verifies and acts upon command data.
38. A method according to claim 37, wherein the addressed resource is an Internet resource and the terminal launches a browser and uses that browser to load the Internet resource.
39. A method according to claim 38, further comprising displaying, viewing and optionally interacting with the Internet resource.

09/666,655
Art Unit 2623
8798

40. A method of controlling a terminal, the method comprising:

using a hand-held device as a writing or drawing instrument;
sensing movement of the device to generate a text or graphics file as a user writes or draws with the device; and
uploading that file from the device to the terminal.

41. A method according to claim 40, further comprising using the hand-held device

to cause the terminal to connect by a communications network to the addressed resource and
to convey the text or graphics file as message information to that resource.



Technical Reference for Hayes™ Modem Users



APPENDIX A

Table of Contents

Introduction.....	i
Who Should Use this Reference.....	i
How this Reference is Organized	ii
How to Use this Reference.....	ii
Chapter 1	1-1
The Hayes Standard AT Command Set.....	1-1
1.1 AT Command Listing.....	1-1
A - Answer Command.....	1-1
B - Select Communication Standard.....	1-1
C - Carrier Control Selection.....	1-3
D - Dial Command.....	1-3
Dial Modifiers.....	1-4
E - Command State Character Echo Selection.....	1-6
F - On-line State Character Echo Selection.....	1-6
H - Hook Command Options.....	1-6
I - Internal Memory Tests	1-6
I0 - display product code.....	1-6
I1- display ROM checksum.....	1-7
I2 - perform ROM checksum	1-7
I4 - identify product features.....	1-7
L - Speaker Volume Level Selection.....	1-12
M - Speaker On/Off Selection.....	1-12
N - Negotiation of Handshake Options.....	1-12
O - On-Line Command	1-13
P - Select Pulse Dialing Method.....	1-13
Q - Result Code Display Options.....	1-13
Sr - Addresses An S-register.....	1-13
Sr=n - Write To An S-register.....	1-13
Sr? - Read An S-register.....	1-13
T - Select Tone Dialing Method.....	1-13
V - Result Code Format Options	1-14
W - Negotiation Progress Message Selection.....	1-14
X - Call Progress Options.....	1-15
Y - Long Space Disconnect Options.....	1-15
Z - Soft Reset Command.....	1-15
&A - Select Originate or Answer Role for Auto-Answer Mode.....	1-16
&B - V.32/V.32 bis Auto Retrain Options.....	1-16
&C - Data Carrier Detect Options	1-16
&D - Data Terminal Ready Options	1-18
&F - Recall Factory Profile.....	1-19
&G - Guard Tone Selection	1-19
&J - Jack Type Selection (Auxiliary Relay Options).....	1-19
&K - Local Flow Control Options.....	1-19
&L - Line Type Selection (Dialup/Leased).....	1-20
&O - PAD Channel Selection	1-20
&Q - Communications Mode Options	1-20
&R - RTS/CTS Options.....	1-21
&S - Data Set Ready Options.....	1-21
&T - Test Options	1-22
&U - Trellis Coding Options.....	1-26
&V - View Configuration Profiles.....	1-26
&V6 -View Blacklisting Entries.....	1-27
&W - Write Active Profile to Memory.....	1-27
&X - Synchronous Transmit Clock Source.....	1-27
&Y - Select Stored Profile For Hard Reset.....	1-27
&Zn=x - Store Telephone Number.....	1-28

Chapter 1

The Hayes Standard AT Command Set

This chapter is divided into three sections: "AT Commands Listing," "Result Code Listing," and "S-register Listing." The first section defines individual AT commands. Commands are listed alphabetically for easy reference. The second section defines the result codes that can be returned by Hayes modems. These are listed in numeric order. The third section defines Hayes S-registers. These, too, are in numeric order. For completeness, definitions of the AT command prefix, the end-of-line character, and other information related to the use of the Hayes Standard AT Command Set are also included.

Note: For the factory setting and available options/ranges for commands and registers, refer to the Hayes Standard AT Command Set Reference provided with your modem. Unless a command, register, or result code is listed in the Reference, it is not supported by your modem, although it appears in this document.

1.1 AT Command Listing

Each step in the evolution of Hayes modems has added to a feature set that has enhanced the definition of the Hayes standard.

A – Answer Command

The **A** command instructs the modem to go off hook and respond to an incoming call, then handshake with the remote modem. When the modem returns the **RING** result code, issue **ATA<CR>**. The modem will send an answer carrier signal to the originating modem and wait for an originate carrier signal. When the modem receives the carrier from the originating modem, the modems go through a handshaking process then go on-line. The modem returns the **CONNECT XXXXX** or **CARRIER XXXXX** result code (see *Result Code Listing* in this chapter). If no carrier signal is received within the time specified in register **S7**, the modem hangs up, returns the **NO CARRIER** result code, and enters the command state. By using the **&An** command, the modem can be forced to answer in the originate mode.

B – Select Communication Standard

The **B** command is used to specify the desired communications standard setting at a particular modem line speed. Because options can select between groups of options, more than one combination of communication standard and speed can be selected. For example, you can issue **B1** and **B16**; both will be in effect because they do not reference the same line speed. However, choosing **B1** then **B5** selects **B5**, and replaces **B1** as the standard for 1200 bps communications. The most recent selection chosen from any given group will be in effect for that parameter group.

APPENDIX A

Group 1

Command	Description
B or B0	V.22 when line speed is at 1200 bps
B1	U. S. Domestic industry standard 212A when line speed is at 1200 bps
B2	V.23 R1200/T75 bps Auto Speed Buffering (ASB) when line speed is at T1200/R1200 bps
B3	V.23 T1200/R75 bps Auto Speed Buffering (ASB) when line speed is at T1200/R1200 bps
B4	V.23 T1200/R75 bps split speed when line speed is at T1200/R75 bps
B5	V.23 1200 bps half duplex when line speed is at T1200/R1200 bps

Group 2

Command	Description
B10	V.23 R1200/T75 bps split speed when line speed is at R1200/T75 bps
B11	V.23 R600/T75 bps split speed when line speed is at R600/T75 bps

Group 3

Command	Description
B15	V.21 when line speed is 110/300 bps
B16	U. S. Domestic industry standard 103 when line speed is at 110/300 bps

Group 4

Command	Description
B20	V.23 R600/T75 bps ASB when line speed is T600/R600 bps
B21	V.23 T600/R75 bps ASB when line speed is T600/R600 bps
B22	V.23 T600/R75 bps split speed when line speed is T600/R75 bps
B23	V.23 600 half duplex when line speed is 600 bps

Group 5

Command	Description
B30	V.22bis when line speed is 2400 bps

Group 6

Command	Description
B41	V.32 full duplex when line speed is 4800 bps
B42	Express 96* when line speed is 4800 bps

Group 7

Command	Description
B50	V.29 HDX when line speed is 7200 bps

Group 8

Command	Description
B60	V.32 full duplex when line speed is 9600 bps
B61	Express™ 96* when line speed is 9600 bps
B63	V.29 half duplex when line speed is 9600 bps

* Express 96 – a Hayes proprietary protocol that simulates full-duplex 9600 bps operation (formerly known as Hayes fast-turnaround "Ping-Pong" protocol).

APPENDIX A

C – Carrier Control Selection

The **C** command is used by some Hayes modems, such as Smartmodem 1200, to control the transmit carrier. In these instances, **C0** instructs the modem to not send carrier (i.e., puts modem in a receive-only mode). High-speed modems (those capable of speeds greater than 1200 bps) accept **C1** without error in order to assure backward compatibility with communications software that issues **C1**. However, these modems do not support **C0**.

C0	Transmit carrier always off (not supported in high-speed modems)
C1	Normal transmit carrier switching

D – Dial Command

The **D** command places the modem in originate mode; it then functions as an auto-dialer. Whether the command is issued on a line by itself, or followed immediately by the telephone number, it must be preceded by the AT prefix and terminated with a **<CR>**. (Note that **<CR>** is the notation used throughout this reference to represent the carriage return, enter, or return function on your keyboard.) The dial string is a combination of dial digits and dial modifiers. If the modem is off hook, it will neither initially wait nor attempt to detect dial tone before proceeding. The **D** command is not valid when the modem is on-line or if either **&Q2** or **&Q3** is in effect. Parentheses and hyphens in a dial string are ignored by the auto-dialer, but are counted as characters in the command buffer. The command buffer for most Hayes Smartmodem Products can contain as many as 40 characters. Hayes V-series products can hold as many as 255 characters in their command buffers.

Result Codes	Description
BUSY	if X3 or X4 are selected or W dial modifier is used and busy is detected
NO DIALTONE	if X2 or X4 are selected and 1 second of dial tone is not detected; in response to a W dial modifier if dial tone is not detected within the time specified by S7
ERROR	if the S=n dial modifier is processed and the <i>n</i> value is out of range (refer to the S dial modifier in this section) or if the total number of characters in the command line plus the stored dial string exceeds the command buffer limit
NO ANSWER	if @ dial modifier is used and then no signal is detected for at least five continuous seconds before the time specified by S7
OK	if aborted by DTR ON-to-OFF whenever certain combinations of &D and &Q are in effect. Refer to the &D command in this chapter for details; if the semicolon (;) dial modifier is processed in the dial string; if aborted by a character from the DTE during the dialing process

APPENDIX A

Dial Modifiers

Dial modifiers can be combined with the dial (**D**) command to permit a series of operations within a single command line. For example, **ATDT9W5552368!@#71234; <CR>** instructs the modem to use tone dialing (**T**) to access a number outside a PBX (**9**), wait for dial tone (**W**), dial the number 5552368, enter a timed break recall (**!**), wait for quiet answer (**@**), and issue the PBX transfer code (**#7**) before dialing extension number 1234, then return to the command state; before initiating the handshake.

0-9 A B C D # * – Digits/Characters for Dialing

The digits/characters **0-9 A B C D # *** are numbers and characters the modem can dial. The characters **A B C D # *** represent specific tone pairs and therefore can be used only when tone dialing is selected; these symbols are ignored when pulse dialing is used.

P – Pulse Dialing Method

The **P** dial modifier selects the pulse method of dialing. The **P** modifier can be issued with the dial command, or alone, to indicate the method used for subsequent dialings. The factory-set method is pulse. Once this method is selected, it is used until the other is chosen, or the modem is reset.

T – Tone Dialing Method

The **T** dial modifier selects the tone method of dialing. The **T** modifier can be issued with the dial command, or alone, to indicate the method used for subsequent dialings. Once this method is selected, it is used until the other is chosen, or the modem is reset, reinstating pulse dialing.

W – Wait for Second Dial Tone

The **W** dial modifier instructs the modem to wait for dial tone before proceeding. If dial tone detection is not completed within the preset time limit, the modem hangs up and returns the **NO DIALTONE** result code. Some PBXs do not return a secondary proceed indication (second dial tone). The **W** dial modifier is not effective in such systems and should not be used.

, – Delay Processing of Next Character

The comma (,) dial modifier in a dial string causes the modem to pause before processing the next character or symbol in the command line. The duration of the pause is determined by the value held in register **S8**. The comma is frequently inserted after the **9** (digit generally used to gain outside access from a PBX) to allow sufficient time for the dial tone to occur before the modem dials the telephone number.

@ – Wait for Quiet Answer

The **@** dial modifier instructs the modem to listen for five seconds silence before continuing. The number of seconds the modem waits for silence is determined by the value held in **S7**. This modifier is useful when dialing telephone systems that produce no dial tone. If a five-second silence has not been detected within the period set in **S7**, the modem hangs up and returns the **NO ANSWER** result code. If it detects the five seconds of silence, the modem processes the remaining characters in the dial string. Note that the modem does not listen for silence until it first detects dial tone and some other signal, such as a ringing signal, that lasts longer than 210 milliseconds. For example, to dial 5552368, wait for a quiet answer, then dial a security code 85939, wait for a second dial tone, and dial extension 423 you would issue the following command: **ATDT 5552368 @ 85939 W 423 <CR>**.

APPENDIX A